

REMARKS/ARGUMENTS

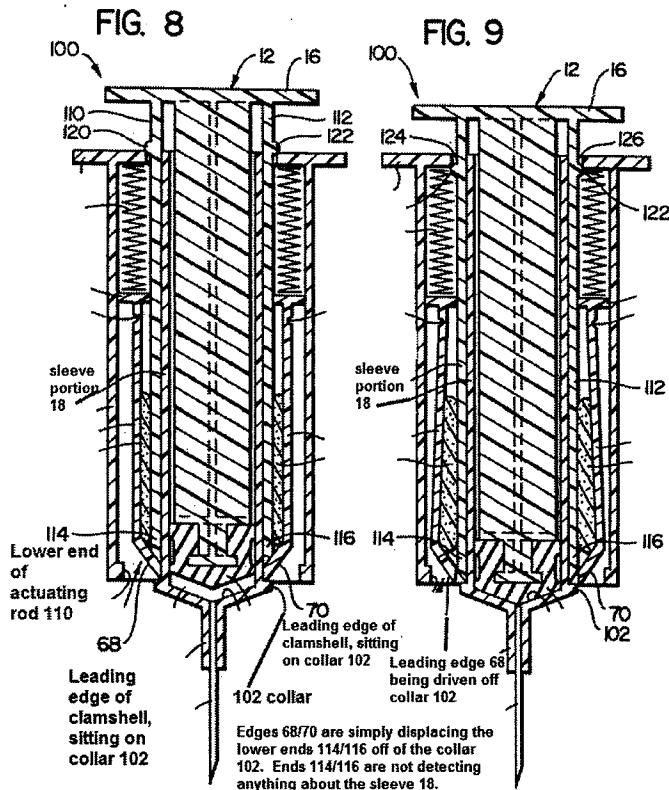
By this Amendment, Claim 12 has been amended. Thus, Claims 1-18 are pending.

The Examiner has maintained her rejection of Claims 1-11 and 18 under 35 U.S.C. §102(b) based on U.S. Patent No. 5,342,320 (Cameron). In particular, the Examiner asserts that Figs. 8-9 of Cameron disclose that lower ends 114/116 are advanced until they contact retaining shoulder 102 which is the end profile of the barrel, and that Fig. 9 specifically discloses that lower ends 114/116 contact shoulder 102 in response to contacting shoulder 102, this disengages the shield members such that it triggers activation of the shield driver.

Applicants respectfully disagree for the following reasons.

As shown clearly in Figs. 8-9 below of Cameron, the lower ends 114/116 are not detecting anything but rather are simply displacing the leading shield ends 68/70 are way from the shoulder 102. In fact, as shown in Fig. 9 of Cameron, lower ends 114/116 can only make contact with the shoulder 102 once those ends 114/116 have displaced the shield ends 68/70 off of them. In other words, contact of the shoulder 102 by the lower ends 114/116 is not the cause of releasing the shield ends 68/70 but rather the result of the displacement of the shield ends 68/70. This is completely supported by the text of Cameron:

...As plunger assembly 12 is depressed past the first stop position shown in FIG. 8 to the second stop position shown in FIG. 9, the outwardly bevelled lower ends 114, 116 of the actuating rods 110, 112 react against the inner surfaces of the leading edge portions 68, 70 of clamshell halves 46, 48, forcing the leading edges of the clamshell halves to flex outwardly, this flexing motion being facilitated by grooved hinged portions 82, 84. As this is done, the leading edges 68, 70 of the clamshell halves move outwardly beyond the radial limit of retaining shoulder 102, and are so released therefrom. (Cameron, col. 9, lines 15-26).



Note that Cameron is completely silent about the lower ends 114/116 contacting the collar 102 first, then causing the leading edges 68/70 of the clamshell to flex outward. Rather, as stated by Cameron, it is [that] the “lower ends 114, 116 of the actuating rods 110, 112 react against the inner surfaces of the leading edge portions 68, 70 of clamshell halves 46, 48, forcing the leading edges of the clamshell halves to flex outwardly beyond the radial limit of retaining shoulder 102.” Therefore, what is triggering the clamshell is the lower ends 114/116 reacting against the inner surfaces of the leading edge portions 68/70 and has nothing to do with detecting any end of the profile of the barrel (which corresponds to sleeve portion 18 in Cameron). As a result, the Examiner’s position that:

...lower ends 114/116 contact shoulder 102 in response to contacting shoulder 102, this disengages the shield members such that it triggers activation of the shield driver; (emphasis added);

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is not supported by either Figs. 8-9 nor the corresponding text at col. 9, lines 15-26 of Cameron.

Thus, in view of the foregoing, Applicants respectfully submit that Claim 1 is patentable over Cameron and that the §102(b) be withdrawn.

Claim 2 is dependent upon Claim 1 and is patentable for the same reasons.

Claim 3 is dependent upon Claim 2 and is patentable for the same reasons.

Claim 4 is dependent upon Claim 1 and is patentable for the same reason. In addition, although the Examiner fails to identify what she considers is the “driver” in Cameron, it appears from her comments to Claim 1 (“...said driver (114 are connected to the driver via attachment area 110)”), the driver of Cameron is the plunger assembly 12. If so, the driver 12 of Cameron does not carry the shield driver means to a shield activation point. As can be seen in Figs. 8-9 of Cameron, the spring 106 and thrust ring 104 do not move when the plunger 12 is displaced downward. Only when the shield ends 68/70 are displaced, does the shield driver means move.

Claim 5 is dependent upon Claim 4 and is patentable for the same reasons. Furthermore, the spring 106 of Cameron is not fixed at its proximal end to the driver but rather to an upper flange 40 of the housing 24 (see Cameron, col. 8, lines 48-49) nor is it attached to the driver at its distal end but rather it is attached to the thrust ring 104 of the shield at its distal end (see Cameron, col. 8, lines 49-50).

Claim 6 is dependent upon Claim 1 and is patentable for the same reasons. Furthermore, the plunger 12 of Cameron does not receive additional driving force from the spring 106 during the plunger’s displacement.

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Claim 7 is dependent upon Claim 6 and is patentable for the same reasons. Furthermore, the spring 106 of Cameron is not fixed to plunger 12 at its distal end but is rather fixed to the thrust ring 104.

Claim 8 is dependent upon Claim 1 and is patentable for the same reasons. In addition, according to the Examiner in her comments to Claim 1, she identifies reference 114 of Cameron as sensor means. However, there is no discussion in Cameron about either of the leading edges 114/116 of the actuating rods 110/112 being deformable for detecting an end profile. And even if the leading edges 114/116 were deformable, that would defeat the purpose of being able to deflect the shield ends 68/70.

Claim 9 is dependent upon Claim 8 and is patentable for the same reasons.

Claim 10 is dependent upon Claim 8 and is patentable for the same reasons.

Claim 11 is dependent upon Claim 1 and is patentable for the same reasons.

Claim 18 is dependent upon Claim 1 and is patentable for the same reasons.

Claims 12-17 are under 35 U.S.C. §103(a) as being unpatentable over Cameron in view of U.S. Patent Publication No. 2002/0193746 (Chevallier). In particular, the Examiner asserts:

...Cameron discloses the device substantially as claimed including an injection device (Figs. 8-11) comprising: a cartridge barrel (18), said barrel arranged to contain a stopper and fluid therein and wherein said barrel has a distal first end (near 132) and a second open end (near 126) and a second end having a radial flange adjacent to the second end (near 124 and 126); a needle cannula (20) having a sharp distal end and a second open end, the fluid being in communication with said needle second end, and wherein said needle second end is coupled at said distal first end; a housing (24) surrounding said barrel, said housing having a distal open end (near 30) adjacent the needle and a proximate end (near 40); a shield (46/48) releasably retained by the housing, said housing and said shield arranged in a sliding relationship with the shield positioned primarily within the housing until release (fig. 8); a driver (12/14), said driver positioned partially within said housing, said driver equipped with at least one deformable side arm (the examiner is interpreting the deformable side arm as being the bottom radially extending flange of the plunger 76, as the plunger is deformable and since the flange extends radially it could be interpreted as a side arm, and the plunger is part of the driver. Please note that Applicant has not claimed that the side arm must be located outside of the syringe barrel, and Applicant has not claimed any structure regarding the side arm) sensing the distal first end of the barrel (Fig. 9 discloses that the plunger

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76 senses the distal end of the barrel when it contacts the barrel. Please note that nothing else regarding “sensing the distal end of the barrel” has been claimed), said driver slidingly located within said housing for moving the stopper forward (Figs. 8-11); and a biasing spring (106), said biasing spring further adapted to bias the shield to automatically cover the needle after said driver detects the end of the barrel (when the plunger hits the end of the barrel (when the plunger hits the end of the barrel as disclosed in Fig. 9, the attached 114 disengage the shield from the catch and allow the spring to bias the shield to cover the needle). Cameron, however, does not disclose that the housing has a flange receiving the radial flange of the barrel. Chevallier, however, discloses a similar injection device (Fig. 1-5) in which a syringe barrel is received within a housing, and the syringe barrel flanges are received on a flange in the proximal end of the housing (Figs. 2, 3 and 5 for example). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Cameron’s device by separating the syringe from housing into two components, as taught by Chevallier, as this would only involve separating the syringe from housing into two components, as taught by Chevallier, as this would only involve separating components, and it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. (Final Rejection, dated March 17, 2010, pp. 6-7).

To that end, to more clearly distinguish over the Examiner’s citation of Cameron in view of Chevallier, Applicant has amended Claim 12 to specify that the at least one deformable side arm is disposed on an exterior surface of the barrel. As a result, this distinguishes from the Examiner’s assertion that the seal member 76, located within the sleeve portion 18, serves as the at least one deformable side arm. Thus, Applicants respectfully submit that Claim 12, as amended, is now patentable over the cited art.

Claim 13 is dependent upon Claim 12 and is patentable for the same reasons.

Claim 14 is dependent upon Claim 12 and is patentable for the same reasons.

Claim 15 is dependent upon Claim 12 and is patentable for the same reasons.

Claim 16 is dependent upon Claim 15 and is patentable for the same reasons.

Claim 17 is dependent upon Claim 15 and is patentable for the same reasons.

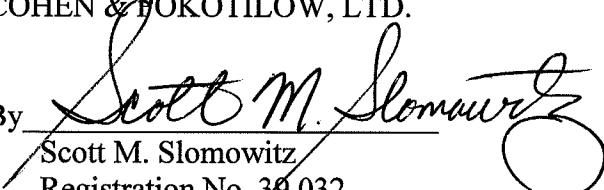
Thus, Applicants respectfully submit that Claims 1-18 are now in condition for allowance. Accordingly, prompt and favorable examination on the merits is respectfully requested.

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Should the Examiner believe that anything further is desirable in order to place the application in even better condition for initial examination and allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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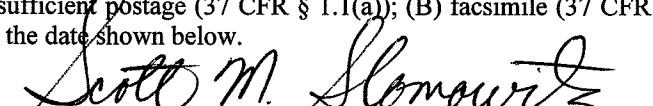
June 16, 2010

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Date: June 16, 2010

Signature: 

Name: Scott M. Slomowitz